

IN THE SPECIFICATION

*Please amend the following paragraphs as noted.*

[0043] The fluid meniscus may be moved on (or off) of the wafer at an edge of the wafer 108. For fluid meniscus removal and/or application on the periphery of the wafer 108, in one embodiment, the system 100 includes a ~~couple~~ coupon magazine 126 attached on a top surface of a wafer processing assembly. In one embodiment, coupon assembly 126 includes a ~~couple magazine~~ bottom plate 124 and top portion 122. The coupon assembly 126 may be configured to hold a docking station 120 in an accurate static position that is substantially planar to a wafer plane and between the proximity heads 106a and 106b. In a preferable embodiment, when the docking station 120 is not substantially coplanar with the wafer plane, the docking station 120 may be adjusted with a leveling mechanism (as discussed in further detail in reference to Figure 7) so the wafer 108 is substantially coplanar with the docking station. Therefore, the docking station may emulate a wafer surface when the process being conducted by the proximity head 106 is ending and transitioning off of the wafer surface as described in further detail in reference to Figure 2B. It should be appreciated that the docking station 120 as described herein may be made from any suitable hydrophilic material such as, for example, quartz, ceramic, etc. The docking station may have a docking surface for the fluid meniscus that is adjacent to an edge of the substrate where the docking surface is in the same plane as the substrate. The docking surface of the docking station may provide a transition interface to allow the fluid meniscus to enter and exit the surface of the substrate. In one embodiment, the docking surface has a radial contour that matches a ~~radial~~ radial contour of the substrate. As a result, the docking surface may provide a transition interface for a fluid meniscus of the proximity head. Therefore, by providing a substantially continuous simulate wafer surface, the meniscus that is transitioning onto or off of the wafer 108 may remain stable.

[0044] It should be appreciated that the ~~magazine~~ coupon magazine 126 may be designed with a specific intent to securely hold and level a substrate of regular or irregular geometric shape in a static position for processing when using the proximity head technology. In addition, the ~~magazine~~ coupon magazine 126 may be utilized with any suitable proximity head operation such as, for example, etching, cleaning, drying, plating, etc.

[0046] Figure 2B illustrates an exemplary proximity head docking operation using the docking station 120 in accordance with one embodiment of the present invention. The

docking station 120 may include a surface 120a that may simulate an arc curvature 108a so that a meniscus formed on the wafer 108 may travel off onto the docking station 120 without a breakdown in the meniscus. In one exemplary embodiment, the proximity head 106 ~~126~~ may be moved from a location 127 ~~126~~ of the wafer 108 to a location off of the wafer onto the docking station 120. The docking station is held onto place in the coupon magazine 122.

[0047] Figure 2C shows a meniscus traveling off of the wafer 108 onto the docking station 120 in accordance with one embodiment of the present invention. In one exemplary embodiment, a meniscus 140 formed by the proximity head 106 may be used to process a wafer surface of the wafer 108 as described in further detail in the Applications. The meniscus 140 may be moved from the wafer to a location 160. The location 160 includes a portion of the docking station 120 that simulates a surface of the wafer 108. It should be appreciated that the docking station 120 may be configured in any suitable fashion that enables the simulation of the wafer surface to keep the meniscus 140 stable. It should also be understood that the docking station may be any suitable distance away from the wafer 108 that can effectively enable the docking station 120 to simulate a wafer surface as the meniscus 140 is moving off of the wafer 108. In one embodiment, distance of the closest portion of the docking station 120 to the wafer is between 0.01mm and 10.0mm. In a preferable embodiment, the docking station 120 is located about 0.1mm away from the wafer 108.

[0048] Figure 3 illustrates a close up view of the wafer processing system 100 without some of the components to show a better view of the coupon magazine 126 in accordance with one embodiment of the present invention. The coupon magazine 126 may include a top portion 122 attached to a bottom portion 124 ~~126~~. In such an embodiment, the top portion 122 and the bottom portion 124 ~~126~~ may be attached with at least a portion of the docking station being located between the top portion 122 and the bottom portion 124 ~~126~~. In one embodiment, the coupon magazine 126 is a device holder that may be fabricated from chemically compatible and mechanically stable materials such as, for example, polyethylene terephthalate (PET), Polyvinylidene Fluoride (PVDF), polyetheretherketone (PEEK), etc. The coupon magazine 126 may be machined with precise features to specific tolerances as desired. The coupon magazine 126 may be configured to be securely and accurately position a substrate of any suitable geometric size, shape, and thickness between, over, or under any suitable combination of proximity heads. Proximity heads as described herein and described in the U.S. Patent Applications referenced above may also be known as MVIV manifolds. The coupon magazine 126 may be used on any suitable lab test fixture or in any suitable

production apparatus that may use proximity heads. The docking station 120 may be made substantially planar to the wafer surface by adjusting or leveling the ~~couple~~ coupon magazine 126 as discussed in reference to Figure 7. In one embodiment, either or both of the coupon magazine 126 or the coupon magazine mount 128 may be adjusted to make the docking station 120 coplanar with the wafer surface. Therefore, the coupon magazine 126 is extremely flexible in use and may intelligently and powerfully optimize wafer processing operations.

[0049] Figure 4 depicts a more detailed view of the ~~couple~~ magazine 126 with a portion of the proximity head 106 showing inlets and outlets in accordance with one embodiment of the present invention. In one embodiment, by varying the shape and size of the top portion 122 and the bottom portion 124, the coupon magazine ~~assembly~~ 126 may be configured to hold the docking station 120 of any specific shape, such as, for example, a 200 mm docking state, a 300 mm docking state, etc. The coupon magazine 126 may also hold any suitable random shape wafer of varied size and thickness.